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1-800-994-9662

TDD: 1-888-220-5446

Heart and Cardiovascular Disease

Q: What is heart and cardiovascular disease?

A: While often thought of as the same thing, heart and cardiovascular disease are different, involving different parts of your body.

- *Heart disease* refers only to diseases of the heart and the blood vessel system within the heart.
- *Cardiovascular disease* refers to diseases of the heart and diseases of the *blood vessel system* (arteries, capillaries, veins) within a person's entire body, such as the brain, legs, and lungs. "Cardio" refers to the heart and "vascular" refers to the blood vessel system.

The heart is a strong, muscular pump slightly larger than your fist. It pumps blood continuously through the *circulatory system*, the network of elastic tubes that allows blood to flow throughout your body. The circulatory system includes two major organs, the heart and lungs, and blood vessels (arteries, capillaries, and veins). Arteries and capillaries carry oxygen- and nutrient-rich blood from the heart and lungs to all parts of the body. Veins carry oxygen- and nutrient-depleted blood back to the heart and lungs. Heart and blood vessel problems do not happen quickly. Over time, the arteries

that bring blood to the heart and brain can become blocked from a buildup of cells, fat, and *cholesterol* (plaque).

Reduced blood flow to the heart from blockages in the arteries causes heart attacks. Lack of blood flow to the brain from a blood clot, or bleeding in the brain from a broken blood vessel, causes a stroke.

Q: Do women really need to worry about heart and cardiovascular disease?

A: Yes. Many women think heart disease is a man's problem, but heart disease is very much a woman's problem. Did you know that heart disease is the #1 killer of women, as well as men in America? And that stroke is the 3rd leading cause of death for American women (cancer is #2)? Heart disease affects women of all racial and ethnic groups, as well as women with other illnesses, such as diabetes. Black women are more likely to die of heart disease than white women are. Increasing age is also a factor in heart disease and with people age 65 and over being the fastest growing group in the U.S., heart disease is becoming a growing problem for women.

Almost twice as many women die from cardiovascular diseases than from all forms of cancer combined. Men have heart attacks and strokes more often than do women. But, the death rate for women from cardiovascular disease is higher. As women age, particularly after menopause, they become more at risk for cardiovascular disease. Lower levels of estrogen during and after menopause are thought to increase a woman's risk for cardiovascular disease. Early menopause, natural or surgical, can



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double a woman's risk for developing *coronary heart disease* (see next question for definition). Younger women are also at risk for cardiovascular disease if they smoke or have high blood pressure, diabetes, high cholesterol levels, and a family history of cardiovascular disease at young ages. Women with *congenital heart disease* (born with a heart defect) have a higher risk of having a baby with a heart defect.

Q: What are the different types of heart and cardiovascular disease?

A: There are many forms of heart and cardiovascular disease, and what follows is a description of the most common of these diseases. The National Women's Health Information Center (NWHIC) has provided links at the beginning of this FAQ, as well as at the end, for further information.

- **Atherosclerosis.** Atherosclerosis is a type of *arteriosclerosis* (or thickening and hardening of the arteries). As we age, some hardening of the arteries can occur naturally. When a person has atherosclerosis, the inner walls of the arteries become narrower due to a buildup of plaque. Plaque results from deposits of fat, cholesterol, and other substances. Blood clots form, blocking blood flow, which can lead to heart attacks and strokes. High blood cholesterol, smoking, high blood pressure, diabetes, obesity, and not being physically active all put you at greater risk for atherosclerosis.
- **Coronary heart disease (or coronary artery disease).** Coronary heart disease, the most

common form of heart disease, affects the blood vessels (or coronary arteries) of the heart. It causes angina (chest pain) and heart attacks. Women over the age of 40 are more at risk for this disease because heart-related problems tend to increase with age. And, black women are more likely to die of coronary heart disease than are white women. The good news is that you can do something about preventing this disease. High blood pressure and cholesterol, smoking, obesity, and not being physically active all put you at greater risk for coronary heart disease.

- **Angina.** A pain or discomfort in the chest that happens when some part of the heart does not receive enough blood. It feels like a pressing or squeezing pain, often in the chest under the breastbone, but sometimes in the shoulders, arms, neck, jaw, or back. The most common trigger for angina is physical exertion. Other triggers can be emotional stress, extreme cold or heat, alcohol, and smoking. Angina seldom causes permanent damage to the heart, like a heart attack can. A heart attack happens when the blood flow to a part of the heart is suddenly and permanently cut off.
- **Stroke.** Lack of blood flow to the brain from a blood clot, or bleeding in the brain from a broken blood vessel, causes a stroke. Without a good blood supply, brain cells cannot get enough oxygen and begin to die. You can also have what are sometimes called "mini strokes," or *transient ischemic attacks* (TIAs), where no damage is done to the



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brain. But even though they do no damage, TIAs are serious and can put you at higher risk of having a full stroke. Not controlling high blood pressure, smoking, and diabetes all increase your risk for stroke.

- **High blood pressure (or hypertension).** There are ways to measure blood pressure and medications to treat high blood pressure (by lowering it). A blood pressure reading measures the force of blood pumped from the heart against the walls of your blood vessels. It is recorded as two numbers: a top number of systolic pressure, or the pressure of blood in the vessels as the heart beats; and a bottom number of diastolic pressure, or the pressure of the blood between heart beats (when the heart rests). Although the average blood pressure reading for adults is 120/80, a slightly higher or lower reading (for either number) may not be a problem. High blood pressure is diagnosed when the reading consistently exceeds 140/90. It is often called a "silent" killer because it usually has no signs or symptoms. High blood pressure can cause heart failure in women, and can also lead to stroke, kidney failure, and other health problems. More than half of all women over age 55 suffer from this serious condition. And, it is more common and more severe in black women. Talk to your health care provider and get your blood pressure monitored regularly. If you have high blood pressure, diet, exercise, and medicine can help you

to lower and control your blood pressure.

- **Heart failure.** Heart failure means that the heart is not able to pump blood through the body as well as it should. It does NOT mean that the heart literally stops. Heart failure develops slowly over time and can have a large impact on a person's life and ability to perform daily activities of living, such as dressing, bathing, and getting around.

Congestive heart failure is a term often used to describe heart failure. But congestion, or the buildup of fluid, is only one symptom of heart failure and does not occur in all people who have heart failure. There are two main categories of heart failure—*systolic* and *diastolic*—and within each category, symptoms can differ from person to person. *Systolic heart failure* happens when the heart's ability to pump blood decreases. The heart cannot push enough blood into the circulatory system, causing blood coming into the heart from the lungs to back up and leak fluid into the lungs (called *pulmonary congestion*). *Diastolic heart failure* occurs when the heart has trouble relaxing or resting. The heart muscle becomes stiff and cannot fill with blood, causing fluid to buildup (most often in the feet, ankles, and legs) and lung congestion. Talk with your health care provider right away if you have any of the signs of heart failure. There are drugs to treat heart failure. Having a healthy diet and getting regular exercise can lower your risk for heart failure.



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Q: What increases my chances for getting heart and cardiovascular disease?

A: Many things can put a woman at risk for heart and cardiovascular disease. The more risk factors (or things that increase risk) a woman has, the greater the chance that she will develop heart or cardiovascular disease. There are some factors that you can't control such as getting older, family health history, and race. But you can do something about the three biggest risk factors for heart and cardiovascular disease—smoking, high blood pressure, and high blood cholesterol. Stopping smoking will reduce your risk and you can get help, through support groups, special behavior change programs, and medication, to quit. High blood pressure and high blood cholesterol can be controlled through diet, exercise, and medication. Talk with your health care provider about developing a plan for heart and cardiovascular health.

Studies have shown that physical inactivity adds to a person's risk for getting heart and cardiovascular disease. People who are not active are twice as likely to develop heart and cardiovascular disease compared to those who are more active. Excess body weight in women is linked with coronary heart disease, stroke, congestive heart failure, and death from heart-related causes. The more overweight you are, the higher your risk for heart disease.

Diabetes, sometimes referred to as high blood sugar, is a serious condition that raises a woman's risk for heart and cardiovascular disease. Women with diabetes have a greater risk of heart

disease and stroke than do women without diabetes. Diabetes, high blood pressure, high cholesterol, and obesity often go hand-in-hand, raising a person's risk for heart disease. And, diabetes has been found to double the risk of a second heart attack in women but not in men.

Being around tobacco smoke for large amounts of time, or all the time, can increase a person's risk for cardiovascular disease, even if you do not smoke. Today's low-dose birth control pills carry a much lower risk of heart disease and stroke than the higher-dose earlier pills did. But this is not the case for women who smoke or who have high blood pressure.

Q: How can I reduce my risk for heart and cardiovascular disease?

A: Regular physical activity can help you reduce your risk of heart and cardiovascular disease. Being active helps women take off extra pounds, helps to control blood pressure, lessens a diabetic's need for insulin, and boosts the level of "good" cholesterol. Some studies show that being inactive increases the risk of heart attack. Other ways to reduce your risk include:

- Quit smoking – talk with your health care provider if you need help quitting.
- Cut back on foods high in saturated fat and cholesterol.
- Check blood pressure, cholesterol, and blood sugar levels and keep them under control.
- Exercise at least 30 minutes a day on most (if not all) days of the week.



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- Lose weight if you are overweight and keep at a healthy weight.

Q: How much difference can diet and exercise really make on the health of my heart and cardiovascular system?

A: Having a low saturated fat, low cholesterol diet and getting regular exercise are excellent health habits for all women to have. These good health habits will lower blood pressure and keep blood sugar and blood cholesterol levels healthy. Studies have shown that being physically active decreases the risk of cardiovascular disease, high blood pressure, and diabetes.

Women, along with most Americans, are becoming more and more inactive. About 60% of American women do not engage in the recommended amount of physical activity needed to maintain health. The Surgeon General recommends getting 30 minutes of moderate activity on most, and preferably all, days of the week to protect heart and overall health. This includes activities such as brisk walking, bicycling, and gardening. You do not have to do the activity for 30 minutes in a row; you can divide it into shorter periods of at least 10 minutes each. Women who have had heart attacks might worry about exercising after their recovery. Studies have shown that people who include regular physical activity in their lives after a heart attack, improve their chances of survival. If you have had a heart attack, talk with your health care provider about developing an exercise plan.

Q: How does high blood cholesterol affect my risk for heart and cardiovascular disease?

A: Over 25 percent of American women have blood cholesterol levels high enough to put them at risk for heart disease. *Cholesterol* is a waxy substance found in all parts of the body. It makes cell membranes, some hormones, and Vitamin D. Cholesterol comes from two sources: your body and the food you eat. Your liver makes all the cholesterol your body needs. Eating too much cholesterol in animal foods like meats, whole milk dairy products, egg yolks, poultry, and fish can make your cholesterol go up. However, saturated fat in your diet is the main culprit that causes your cholesterol to rise.

Cholesterol travels through the blood in packages called *lipoproteins*. *Low density lipoprotein* (LDL) and *high density lipoprotein* (HDL) are two types of lipoproteins. LDL is often called the “bad” type of cholesterol because it can cause buildup and blockage in the arteries that carry blood to your heart. HDL is known as “good” cholesterol because it helps remove cholesterol from the blood, preventing buildup and blockage in the arteries. The higher your cholesterol, the greater your risk for heart disease.

From the time women turn 20 years old, their blood cholesterol levels start to rise. From age 40, they rise sharply and increase until about age 60. Being overweight and physically inactive also can raise your level of bad (LDL) cholesterol and lower your level of good (HDL) cholesterol. Family history (genes) can also affect how your body makes and handles cholesterol. All



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women age 20 and over need to have their blood cholesterol checked. High blood cholesterol is an important risk factor for heart disease that you can help control with diet, exercise (which will increase HDL and lower LDL), and quitting smoking. In some cases, your health care provider might prescribe cholesterol-lowering medication.

Q: I had my cholesterol checked but I do not understand the results. What do they mean?

A: Talk to your health care provider about the results of your cholesterol test. The following guidelines come from the National Cholesterol Education Program (NCEP) of the National Heart, Lung, and Blood Institute, National Institutes of Health. Cholesterol levels are measured in milligrams (mg) of cholesterol per deciliter (dL) of blood.

- **Total cholesterol level** – a level of less than 200 mg/dL is desirable. But even levels of 200–239 mg/dL (borderline high) can increase your risk of heart disease.

Total Cholesterol Level	Category
Less than 200 mg/dL	Desirable
200 – 239 mg/dL	Borderline high
240 mg/dL and above	High

- **LDL (bad) cholesterol** – a level of 160 mg/dL or above is high. Work with your health care provider to determine a goal LDL level that's best for you.

LDL Cholesterol Level	Category
Less than 100 mg/dL	Optimal
100–129 mg/dL	Near optimal/ above optimal
130–159 mg/dL	Borderline high
160–189 mg/dL	High
190 mg/dL and above	Very high

- **HDL (good) cholesterol** – a level of 60 mg/dL or more is good and helps to lower your risk for heart disease. Remember that HDL (good) cholesterol protects against heart disease, so for HDL, higher numbers are better. A level less than 40 mg/dL is low and increases your risk for developing heart disease.
- **Triglyceride levels** – can also raise your risk for heart disease. Levels that are borderline high (150–199 mg/dL) or high (200 mg/dL or more) may need treatment in some people.

You can also talk with your health care provider about what you can do to help control your cholesterol, including:

- getting your cholesterol checked, understanding what the numbers mean;
- controlling your weight;
- following a treatment program your health care provider prescribes (such as medication and cutting back on foods high in saturated fat and cholesterol);
- exercising regularly (for 30 minutes, most days of the week);
- quitting smoking.



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Q: How do I know if I have heart or cardiovascular disease? Are there any tests?

A: Heart disease can often have no symptoms, which is why it is called a “silent” killer. But, there are some symptoms that can alert you to a possible problem. Chest or arm discomfort, especially while under stress or during activity, is a classic symptom of heart disease, and is a warning sign of a heart attack. You may also have *fatigue* (with no reason why), shortness of breath, dizziness, nausea, or abnormal heart beats (*palpitations*).

Talk with your health care provider if you think you may be having any symptoms of heart disease. Your health care provider will first take a complete medical history and do a physical exam. There are many tests for heart disease. The choice of which (and how many) tests to perform depends on a person's symptoms and history of heart problems. A health care provider will most often start with simple tests, which may lead to tests that are more complex. More than one test may be needed because each test gives different information. Tests can be either *invasive* or *noninvasive*. Invasive tests involve the insertion of needles, instruments, or fluids into the body; noninvasive tests do not.

Q: What are the signs of heart attack and stroke?

A: Know that not everyone gets all of the following warning signs of heart attack or stroke. And, sometimes these signs can go away and return. Treatments are most effective if given within one hour of when the attack begins. **If you have**

any of these symptoms, call 911 right away!

The signs of heart attack include:

- Chest discomfort or uncomfortable pressure, fullness, squeezing, or pain in the center of the chest that lasts longer than a few minutes, or comes and goes.
- Spreading pain to one or both arms, back, jaw, or stomach.
- Cold sweats and nausea.

As with men, women's most common heart attack symptom is chest pain or discomfort. But women are somewhat more likely than men to have some of the other warning signs, particularly shortness of breath, nausea, vomiting and back or jaw pain.

The signs of stroke include:

- Sudden numbness or weakness of face, arm, or leg, especially on one side of the body.
- Sudden confusion, or trouble speaking or understanding speech.
- Sudden trouble seeing in one or both eyes.
- Sudden trouble walking, dizziness, or loss of balance or coordination.
- Sudden severe headache with no known cause.
- Blurred or double vision, drowsiness, and nausea or vomiting.

Q: What are palpitations or “extra” heartbeats? Are they dangerous?

A: “Extra” heartbeats, also called *palpitations*, or *premature ventricular contractions* (PVCs) happen when there is irritation in the lower part of the



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heart's pumping chambers. PVCs interrupt the normal heart rhythm and cause an irregular beat that can feel like a "missed beat" or a "flip-flop" in the chest. This can be harmless or it may lead to problems that are more serious.

If a woman has palpitations and other symptoms such as dizziness or shortness of breath, she should tell her health care provider right away. The health care provider will take a complete medical history and perform a physical exam, and may order further tests to determine the cause of the palpitations. In some people, caffeinated products (coffee, candy bars), alcohol, and stress can cause palpitations. When a woman is in *perimenopause* (the time before menopause), changing hormone levels can also cause harmless palpitations.

Q: What is an arrhythmia? Can you have a heart arrhythmia without having heart or cardiovascular disease?

A: Most people have felt their heart beat very fast, felt a fluttering in their chest, or noticed that their heart skipped a beat. Almost everyone has also felt dizzy, faint, or out of breath or had chest pains at one time or another. While these experiences of *heart arrhythmias* (a change in the regular beat of the heart) can create anxiety, they are, for most people, harmless. As adults age, they are more likely to get arrhythmias. Only a very small number of people have arrhythmias that are dangerous. Don't panic if you have a few flutters or your heart races once in a while. If you have questions about your heart rhythm or symptoms, talk with your health care provider.

Q: Is it safe to take an aspirin a day to prevent heart disease?

A: If you have already had a heart attack, aspirin helps to lower the risk of having another one. It also helps to keep arteries open in those who have had a *heart bypass* or other artery-opening procedure such as *coronary angioplasty*. But, because of its risks, aspirin is NOT approved by the Food and Drug Administration for preventing heart attacks in healthy people. It may even be harmful for some persons, especially those with no risk of heart disease. Talk to your health care provider about whether taking aspirin is right for you. Be sure not to confuse aspirin with other common pain relieving products such as *acetaminophen* (Tylenol), *ibuprofen* (Advil, Motrin), or *naproxyn sodium* (Aleve).

Q: Do birth control pills and hormone therapy (HT) increase a woman's risk for heart disease?

A: Birth control pills have little increased risk of heart disease for women who have not gone through menopause (when periods stop). But, they can pose heart disease risks for some women, particularly women with high blood pressure and women who smoke. Talk with your health care provider about whether birth control pills are best for you.

In the past, taking *hormone therapy* (HT) (estrogen plus progestin) was thought to help protect women against heart disease. But recent findings from the Women's Health Initiative (WHI) study, sponsored by the National Heart, Lung, and Blood Institute, showed that



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taking HT poses more risks than benefits. The study found that HT could increase a woman's risk for heart disease, stroke, and *pulmonary embolism* (blood clot in the lung), as well as breast cancer. Because of these findings, the U.S. Preventive Services Task Force recommends that women who have gone through menopause should not be given HT to prevent heart disease and other *chronic* conditions. For more information on this study, go to <http://www.nhlbi.nih.gov> and click on "Postmenopausal Hormone Therapy," or call the number listed at the end of this FAQ, in the "For more information" section. The WHI is also looking at the effect of taking estrogen alone (this is given to women who have had a *hysterectomy*, or no longer have a uterus, or womb) on heart disease and other conditions; results should be available in the next few years, or sooner.

Earlier studies have also shown that women who have gone through

menopause and who have heart disease, may have a greater risk of another cardiac event (like heart attack) after starting HT, at least in the short-term. For women who have had strokes, their risk for having another stroke goes up when they start taking HT. Hormones are not recommended for women with heart disease or for women who have had a stroke. If you have gone through menopause, talk with your health care provider about whether hormones are right for you. And, keep checking the NWHIC website home page (www.WomensHealth.gov) for updates on postmenopausal hormone therapy.

If you are taking birth control pills or HT, watch for signs of trouble, such as abnormal bleeding, breast lumps, shortness of breath, dizziness, severe headaches, pain in your calves or chest, and report them to your health care provider right away. Also, talk with your health care provider about how often you should have an exam. ■



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For more information . . .

You can find out more about heart and cardiovascular disease by contacting the National Women's Health Information Center (800-994-9662) or the following organizations:

National Heart, Lung, and Blood Institute (NHLBI)

Phone Number(s): (301) 592-8573

Internet Address:

<http://www.nhlbi.nih.gov/index.htm>

National Cholesterol Education Program

National Heart, Lung, and Blood Institute (NHLBI)

Internet Address:

<http://www.nhlbi.nih.gov/about/ncep/index.htm>

Act In Time to Heart Attack Signs Campaign

National Heart Attack Alert Program

National Heart, Lung, and Blood Institute (NHLBI)

Phone Number(s): (301) 592-8573

Internet Address:

<http://www.nhlbi.nih.gov/actintime/>

The Heart Truth

National Awareness Campaign for Women about Heart Disease

National Heart, Lung, and Blood Institute (NHLBI)

Internet Address:

<http://www.nhlbi.nih.gov/health/hearttruth/>

American Heart Association

Phone Number(s): (800) 793-2665

Internet Address:

<http://www.americanheart.org/>

Texas Heart Institute

Phone Number(s): (800) 292-2221

Internet Address:

<http://www.texasheartinstitute.org/>

American College of Cardiology

Phone Number(s): (800) 253-4636

Internet Address: <http://www.acc.org/>

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